



Strategy for Strengthening Accounting Digital Learning at Vocational High School in North Sumatra Province

OK Sofyan Hidayat, Azizul Kholis^(✉), La Hanu, and Choms Gary G. T. Sibarani

Universitas Negeri Medan, Medan, Indonesia
azizulkholis@unimed.ac.id

Abstract. This study aims to determine the application of accounting digital learning at vocational high schools to obtain an appropriate model for optimizing digital learning at the vocational level, especially in the field of accounting. The research was carried out in public and private vocational schools in North Sumatra. Samples of 102 teachers, 300 students, and 15 principals spread over 10 districts/cities. The analytical technique used is Structure Equation Model to examine all variables that affect the strengthening of digital accounting learning. The results of the study indicate that the role of teachers, student support, and principal support affect various factors for strengthening accounting digital learning. The limitation of this study is that it only tests accounting subjects so that limited generalizations. Recommendations for further research to expand subjects and increase the number of research samples. The contribution of this research is on strengthening digital learning and increasing digital literacy at the vocational high school level.

Keywords: Strategy · Strengthening · Digital · Learning

1 Introduction

Mely mastery of innovation, mastery of networks, mastery of technology, and wealth of natural resources (Junaidin and Komalasari 2019), education in Indonesia should emphasize three main abilities (Fajriana and Aliyah 2019). In an era where computers and internet networks are the main basis for the development of this technology, every nation needs to increase competitiveness by increasing human resources by producing a generation of learners who can adapt and continue to develop competencies (Oviyanti 2013; Juhji 2019). The digital era that has changed society into the information society or knowledge society has brought many fundamental changes in various fields (Nurohman, 2014). The characteristics of information and communication technology have lengthened and expanded the thinking power and the overall human mind. This can have a negative impact as stated by Sumardianta that the characteristics of internet technology have led humans to shallowness, practicality, and autism (Sumardianta 2014). This is a negative impact that is a challenge for teachers in today's digital era. Whereas technology is only an extension of human beings so the main control of technology lies

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with humans themselves. Technology only replaces the function of disseminating and disseminating information. Interaction between humans in developing personality, fostering social relationships, a sense of togetherness, caring, responsibility, and empathy is irreplaceable. One of the implications is a change in the educational paradigm where the tendency of learning changes from conventional to learning the age of knowledge that allows everyone to learn anywhere, anytime, and with anyone. The development of technology has also caused the shift in the role of the teacher to be no longer the main and only source of learning (Efferi 2015).

Technology has the idea of reforming the education system, namely a system that teaches students to be more independent (Yunita et al. 2011), create or create creations, and live their lives boldly and confidently. Schools and teachers play a role not only in trying to get students to get the best scores on exams, but what is far more important is to create a generation that can compete, collaborate, and contribute in the future with mature character and personality.

Conventional learning (Hujaemah et al. 2019) causes more boredom in students which affects motivation and competency achievement. This becomes a challenge as well as hope for teachers to be able to adapt and empower them so that they can jump-start student achievement. Digital learning has become very important to be strengthened and cannot be avoided at this time.

This study explains how to strengthen the role of teachers in digital learning. The analysis is carried out conceptually through an idea that is written and analyzed by examining the role and competence of teachers in improving the quality of education and the new paradigm of education in the digital era. For this reason, it is necessary to review the role of teachers in general in Indonesia and the new paradigm of learning in the digital era. This subject matter is based on two fundamental assumptions. First, the teacher has a strategic and very vital role in the learning process as a determinant of the success of student achievement. Second, the new paradigm of learning in the digital era, which is in line with the rapid development of information and communication technology, has marginalized the role of teachers who, if only transfer knowledge, were to be marginalized.

For this reason, this study will examine the factors that support the successful application of digital learning from the aspects of teachers, students, and infrastructure so that it can be a reinforcement to improve digital learning, especially in accounting study programs in SMK. The problems of this research pose research questions as follows:

- 1) Do teachers play a role in strengthening digital learning?
- 2) Do students play a role in strengthening digital learning?
- 3) Does school management play a role in strengthening digital learning?

2 Literature Review

2.1 Digital Learning

Digital learning is learning that works with digital data or can produce a digital image that can be processed, accessed and distributed using digital devices. Digital learning aims to facilitate learning and teaching activities (Smaldino et al. 2005). The application

of digital learning can also improve the quality of learning, demand paradigms, meet market needs and achieve, the vision of education. The application of digital learning can also affect the attitude of knowledge, skills, abilities of and teachers and create a certain learning atmosphere.

The current digital era learning model has differences compared to conventional learning models. According to the author, the digital era learning model consists of 3 models: first, teachers provide online learning materials to students and then download and learn them manually (offline), second, teachers provide online learning materials and students learn online as well, and third, a collaboration between online and offline learning. Then there is also a learning model that is not tied to teachers/lecturers who provide learning materials but can access learning information personally with online learning resources.

2.2 Digital Literacy

Digital literacy is an individual's interest in attitudes and abilities in using digital technology and communication tools to access, manage, analyze, and evaluate information, build new knowledge, communicate and with others in order to participate effectively in society (Setyaningsih et al. 2019). The term digital literacy is used to denote a fundamental aspect of new media, namely digitization. The definition of digital literacy based on the University of Illinois Urbana Campaign in Amalia (2015) explains that digital literacy is an ability that is (expected) to be possessed by individuals so that they can use various digital technologies (computers), communication equipment and computer networks (hardware and software) to facilitate them in creating, locating, and evaluating information Fu (2013).

2.3 Learning Strategies

Strategies can be used to achieve various objectives of providing subject matter at various levels, for different students, in different contexts. Learning strategies are the ways chosen to deliver subject matter in a particular learning environment, including the nature, scope, and sequence of activities that can provide a learning experience to students. Learning strategies are not only limited to activity procedures, but also include learning materials, learning methods or learning packages. The learning strategy consists of all components of the subject matter and procedures that will be used to help students achieve certain learning objectives.

Learning strategy can also be interpreted as a pattern of learning activities that are selected and used by the teacher contextually, according to the characteristics of students, school conditions, the surrounding environment, the adjustment of the times and the specific learning objectives formulated (Anita 2007). Learning strategies are related to learning objectives, this aims to determine effective and efficient learning steps and methods.

3 Method

This study uses quantitative methods by distributing questionnaires to respondents. The study was conducted at a vocational high school in North Sumatra. The research sample

Tabel 1. Sample Distribution

No	County/City	Number of Schools	Respondent		
			Teacher	Student	Principal
1	Medan	3	24	60	3
2	Binjai	1	7	20	1
3	Tebing Tinggi	1	7	20	1
4	Pematangsianatar	1	7	20	1
5	Deli Serdang	2	11	40	2
6	Serdang Bedagai	1	7	20	1
7	Karo	1	7	20	1
8	Batubara	2	12	40	2
9	Asahan	2	12	40	2
10	Tanjungbalai	1	8	20	1

Source: Primary Data (2022)

consisted of 102 teachers, 300 students and 15 principals spread over 10 districts/cities in North Sumatra. Data collection was carried out in March-June 2022 by visiting schools where the research was located. The analytical technique used to analyze the data is SEM (Structural Equation Model) analysis, to test how all variables influence digital learning in accounting subjects. Sample distribution is as follows (Table 1).

4 Result

Nowadays, people are entering an era where information is obtained very easily, even without being searched for. The development of communication and information technology makes the flow of information received by the community break down the boundaries of space and time. The birth of information technology which led to the birth of the information era without borders or also called the digital era has changed the patterns of people's lives in all aspects, including the field of education. The digital era as it is today certainly has a significant effect on how learning patterns are able to empower students while still adapting to the development of communication and information technology.

The learning paradigm shift requires teachers to provide as much experience as possible to students by utilizing various modalities and learning environments that support the shift in the teacher's role from a transmission model to a constructive model. The final result expected from this learning model is the emergence of inspiration that motivates students to be willing and able to learn for life. For this reason, teachers must have high innovation power in learning through deliberate and conscious efforts.

Based on the results of statistical testing, the results of this study are illustrated in the following Fig. 1.

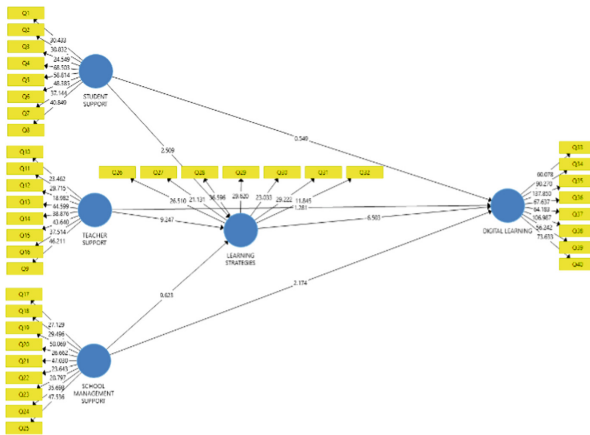


Fig. 1. Strategic model of strengthening digital learning

From the picture above it can be seen that:

- 1) The statistic of student support for digital learning is $0.549 < 1.96$ (Table), this indicates that student support does not directly affect digital learning.
- 2) The statistic of teacher support for digital learning is $1.281 < 1.96$ (Table) this indicates that teacher support does not directly affect digital learning.
- 3) The StatisticSchool management support is $2.174 > 1.96$, this shows that school management support has a direct effect on digital learning.
- 4) The t-statistic of learning strategies is $6.510 > 1.96$, this shows that learning strategies have an effect on strengthening digital learning. Student support, teacher support and school management support affect digital learning through learning strategies.

Learning strategies supported by students, teachers and school management influence digital learning. This shows that the strengthening of digital learning can be increased through learning strategies that are supported by students, teachers and school management as well as other factors. This was also stated by Armawi (2021), Hardhienata (2021) and Pierce (2016) suggesting that the strengthening of digital learning is influenced by school management factors, the roles of teachers and students and learning strategies applied to schools.

Strengthening digital learning must create an effective learning environment and have adequate and ready-to-use facilities. This is the principal’s role as school management. This is stated by Elayan (2022) in achieving the success of digital learning, it must strengthen a technology-based learning culture and create an effective learning environment for students.

Digital learning provides new challenges for teachers with the use of new technologies. Therefore, teachers should learn more about technology or digital literacy. Anggraeni (2019) and Widijaya (2021) both teachers and students must understand digital literacy to strengthen digital learning. Wah (2016) the role of teachers in strengthening digital learning must be able to understand and master digital literacy. This shows that the

role of the teacher is not just transferring knowledge but also showing how the benefits of knowledge and technology for humans. One of the supporting factors for strengthening digital learning is understanding digital literacy (Reddy 2020) and (Cerya 2021). Understanding digital literacy is also able to control the use of technology so that the digitization of learning goes according to expectations. Uncontrolled use of technology will have a negative impact on human life (Sutarman 2019).

Thus, any sophisticated technology (computing and digitalization) must always be able to provide positive benefits and use values for the benefit of human life as a whole. Therefore, digital literacy should actually be able to encourage someone (digital citizen) to be wiser and wiser. According to AJ. Bellshaw that in improving digital literacy must pay attention to the elements of cultural, cognitive, constructive, communicative, self-confident, creative, critical and socially responsible (Rusman 2014).

The teacher's role in strengthening digital learning is not only as a giver of knowledge, but also as a lifelong learner, learning leader, learning resource director, network builder, and opener of communication (Sulistya 2019). These roles cannot be separated from the demands of very fast change in all areas.

Most teachers who enter the digital migrant generation must be able to create an interesting learning atmosphere for students who are digital native generations. They could not retreat in the atmosphere of the analog era. The only way that can be done is for teachers to explore and master the digital world of their students. A special method is needed by digital immigrants to teach digital native students (Lee, Choonkeong & Yau, 2016). Agustini (2020), Ahsani (2021) and Xiaorong (2021) also argue that school management strategies and the role of teachers to improve teacher professionalism through digital literacy are effective.

Learning in the digital age also enables educators to equip learners with the cognitive skills necessary for the information age, and the skills essential for dealing with large amounts of information, such as: problem solving, critical thinking, creativity, independent learning. Strategy, meta-cognition, reflective thinking, social discussion skills, teamwork, and personal skills, such as persistence, curiosity and initiative (Sujana 2019).

Some of the strategies used by school principals include completing facilities and targets that can support digital literacy, strengthening literacy through e-Learning, school strategies by sending teachers and education personnel to receive seminars, training, or technical assistance and assisting Pokja Guru or Principal Groups. (Augustini 2020).

5 Conclusion

This study describes how to strengthen digital accounting learning in vocational high schools. Teachers, students and school management play an active role in strengthening digital learning. Teachers must be provided with information and competence in mastering digitalization as a supporting basis in the application of digital learning. Students as recipients of information must be equipped with information knowledge and use technology properly. Besides that, the principal as management must provide proper facilities for both teachers and students so that digital learning can be carried out properly.

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